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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,304	10/19/2001	Wayne E. Fisher	M-11382 US	5056

7590 06/07/2006

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EXAMINER

LE, UYEN T

ART UNIT	PAPER NUMBER
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2163

DATE MAILED: 06/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/991,304	FISHER, WAYNE E.	
	Examiner	Art Unit	
	Uyen T. Le	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-66 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22,24,26-58 and 63-66 is/are allowed.
- 6) ☒ Claim(s) 1-21,23,25,59-62 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

NOTE: IDS OF 3/13/06 AND 11/16/05 ARE EXACT DUPLICATES. ALL REFERENCES OF IDS OF 08/31/05 WERE PREVIOUSLY CITED BY THE EXAMINER ON PAPERS # 7 AND 11.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/13/06, 11/16/05, 08/31/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment to claims 1, 7, 13, 19 are acknowledged. Applicant's explanations regarding claims 22, 26, 31, 37 have been fully considered and found persuasive. Consequently, rejection of claims 1-66 under 35 U.S.C. 112, second paragraph is withdrawn.
2. Applicant's explanations regarding the drawings are persuasive. Consequently, objection to the drawings is withdrawn.
3. Applicant's arguments regarding claims 1-21, 23, 25, 59-62 have been fully considered but they are moot in view of the new grounds of rejection presented in this Office Action.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-12, 59, 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin, Jr. et al (US 2002/0143763) of record.

Regarding claim 1, Martin discloses a method of organizing data in a database subject to reorganization (see the abstract). Note the root segment and non-root

segment (see 0006). The root segment is clearly stored in a separate storage location since it is the highest level of the hierarchy. Although Martin does not specifically show the claimed "retaining each root segment in its storage location during a reorganization of non-root segment data in said database", it would have been obvious to one of ordinary skill in the art to do so since there is no point to move the root during the reorganization of non-root segments.

Regarding claim 2, Martin suggests all root segments stored within a block of storage locations are stored in contiguous storage locations when Martins shows various segments stored closer together results in faster access times and shorter latencies (see 0012).

Regarding claims 3, 4, 6, Martin suggests fixed storage locations for root segments when Martin shows that it is advantageous to closely position segments belonging to the same database record (see 0014). Since each database record has one root segment (see 0006), it would have been obvious to one of ordinary skill in the art to include fixed storage locations for root segments in order to facilitate positioning non-root segments.

Regarding claim 5, Martin discloses said database is an IMS full function database (see 0014).

Regarding claim 7, which recites the same limitations of claim 1 except storing each non-root segment associated with a root segment in a block of storage locations in which said root segment is also stored, see the reasons stated in claim 1 above. Martin further suggests storing each non-root segment associated with a root segment in a

block of storage locations in which said root segment is also stored when Martin discloses that it is advantageous to store the root segment and associated non-root segments close together (see 0012-0014).

Claims 59, 60 recite a computer program product for the method of claims 1, 7, thus is rejected for the same reasons stated in claims 1, 7 above.

Claims 8-12 recite the same limitations of claims 2-6, thus are rejected for the same reasons stated in claims 2-6 above.

5. Claims 13-21, 23, 25, 61, 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin, Jr. et al (US 2002/0143763) of record, in view of Marshall et al (US 2003/0135478) of record.

Regarding claim 13, which recites the same limitations of claim 1 except the non-root segment and each root segment comprises a prefix component and a data component, see the reasons stated in claim 1 above. Furthermore, since the database is an IMS full function database, clearly each record includes a root segment and one or more on-root segment. Although Martin does not specifically show each root segment comprises a prefix component and a data component, it is well known in the art for a root segment to include a prefix and data as shown by Marshall (see 0143). Therefore, it would have been obvious to one of ordinary skill in the art to include the claimed features while implementing the method of Martin in order to minimize storage by storing the prefix component instead of the entire root segment for reorganization.

Claim 61 recites a computer program product for the method of claim 19, thus is rejected for the same reasons stated in claim 13 above.

Claims 14-18 recite the same limitations of claims 2-6, thus are rejected for the same reasons stated in claims 2-6 above.

Claim 19 essentially recites the limitations of claim 13 with the added limitation of storing the prefix component of each non-root segment which is associated with the first root segment in a block of storage location in which said prefix component of said first root segment is also stored. Therefore, claim 19 is rejected for the same reason stated in claim 13 above. Furthermore, Martin shows that it is advantageous to store the root segment and associated non-root segments close together (see 0012-0014).

Claims 20, 21 recite the same limitations of claims 2, 5, thus are rejected for the same reasons stated in claims 2, 5 above.

Regarding claim 23, although Martin and Marshall do not specifically show the claimed secondary index, it would have been obvious to one of ordinary skill in the art to include such an index in order to store reorganized data.

Regarding claim 25, Martin discloses that the database is an IMS full function database (see 0014).

Claim 62 recites a computer program product for the method of claim 19, thus is rejected for the same reasons stated in claim 19 above.

Allowable Subject Matter

6. Claims 22, 24, 26-58, 63-66 are allowed because applicant's arguments regarding Beier and Marshall references applied by the examiner in the Office Action mailed 27 October 2003 are persuasive.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tschritzis et al, "Hierarchical Data-Base Management: A Survey", ACM 1976, Computing Surveys, Vol. 8, No. 1, March 1976, pages 105-123.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uyen T. Le whose telephone number is 571-272-4021. The examiner can normally be reached on M-F 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

27 May 2006



UYEN LE
PRIMARY EXAMINER